

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) **APPLICANT:** Gudkov, Andrei
Roninson, Igor B.
- (ii) **TITLE OF INVENTION:** Genes And Genetic Elements Associated
With Sensitivity To Chemotherapeutic Drugs
- (iii) **NUMBER OF SEQUENCES:** 22
- (iv) **CORRESPONDENCE ADDRESS:**
 - (A) **ADDRESSEE:** Allegretti & Witcoff, Ltd.
 - (B) **STREET:** 75 State Street
 - (C) **CITY:** Boston
 - (D) **STATE:** Massachusetts
 - (E) **COUNTRY:** U.S.A.
 - (F) **ZIP:** 02109
- (v) **COMPUTER READABLE FORM:**
 - (A) **MEDIUM TYPE:** Floppy disk
 - (B) **COMPUTER:** IBM PC compatible
 - (C) **OPERATING SYSTEM:** PC-DOS/MS-DOS
 - (D) **SOFTWARE:** PatentIn Release #1.0, Version #1.25
- (vi) **CURRENT APPLICATION DATA:**
 - (A) **APPLICATION NUMBER:**
 - (B) **FILING DATE:**
 - (C) **CLASSIFICATION:**
- (viii) **ATTORNEY/AGENT INFORMATION:**
 - (A) **NAME:** Keown, Wayne A.
 - (B) **REGISTRATION NUMBER:** 33,923
 - (C) **REFERENCE/DOCKET NUMBER:** 93,354
- (ix) **TELECOMMUNICATION INFORMATION:**
 - (A) **TELEPHONE:** 617/345-9100
 - (B) **TELEFAX:** 617/345-9111

(2) INFORMATION FOR SEQ ID NO:1:

- (i) **SEQUENCE CHARACTERISTICS:**
 - (A) **LENGTH:** 163 base pairs
 - (B) **TYPE:** nucleic acid
 - (C) **STRANDEDNESS:** single
 - (D) **TOPOLOGY:** linear
- (ii) **MOLECULE TYPE:** cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GTGTCTGGGC GGAGCAAAAT ATGTTCCAAT TGTGTTTTCT TTTGATAGAT TCTTTCAACA 60
GACAGTCTTT TCTTAGCATC TTCATTTTTC TTTATTTTGT TGA CTTCAT ATTTTCATT 120
ACAGGCTGCA ATGGTGACAC TTCCATGGTG ACGGTCGTGA AGGG 164

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 213 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TGAAAAGATG TATGTCCCAG CTCTCATATT TGGACAGCTC CTA ACTTCTA GTA ACTATGA 60
TGATGATGAA AAGAAAGTGA CAGGTGGTCG AAATGGCTAT GGAGCCAAAT TGTGTAACAT 120
ATTCAGTACC AAATTTACTG TGGAACAGC CAGTAGAGAA TACAAGAAAA TGTTCAAACA 180
GACATGGATG GATAATATGG GAAGAGCTGG TGA 213

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 181 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

GCCCATTTGGT CAGTTTGGTA CCAGGCTACA TGGTGGCAAG GATTCTGCTA GTCCACGATA 60
CATCTTTACA ATGCTCAGCT CTTTGGCTCG ATTGTTATTT CCACCAAAAC ATGATCACAC 120
GTTGAAGTTT TTATATGATG ACAACCAGCG TGTGAGCCT GAATGGTACA TTCCTATTAT 180
T 181

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 180 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TGAATGGTAC ATTCCTATTA TTCCCATGGT GCTGATAAAT GGTGCTGAAG GAATCGGTAC 60
TGGGTGGTCC TGCAAAATCC CCAACTTTGA TGTGCGTGAA ATTGTAAATA ACATCAGGCG 120
TTTGATGGAT GGAGAAGAAC CTTTGCCAAT GCTTCCAAGT TACAAGAAGT TCAAGGGTAC 180
TATTGAAGAA CTGGCTCCAA ATCAATATGT GATTAGTGGT GAAG 224

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 329 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

```
TGCGTGAAAT TGTAATAAC ATCAGGCGTT TGATGGATGG AGAAGAACCT TTGCCAATGC   60
TTCCAAGTTA CAAGAACTTC AAGGGTACTA TTGAAGAACT GGCTCCAAAT CAATATGTGA   120
TTAGTGGTGA AGTAGCTATT CTTAATTCTA CAACCATTGA AATCTCAGAG CTTCCCGTCA   180
GAACATGGAC CCAGACATAC AAAGAACAAG TTCTAGAACC CATGTTGAAT GGCACCGAGA   240
AGACACCTCC TCTCATAACA GACTATAGGG AATACCATAC AGATACCACT GTGAAATTTG   300
TTGTGAAGAT GACTGAAGAA AAAGTGGCA                                     329
```

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 193 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

```
CACTCTTTTC AGTTTCCTTT TCGTTGTCAC TCTCTTCATT TTCTTCTTCA TCTGGAACCT   60
TTTGCTGGGC TTCTTTCCAG GCCTTCACAG GATCCGAATC ATATCCCCTC TGAATCAGAA   120
CTTTAATTAA TTCTTTCTTA GGCTTATTTT CAATGATTAT TTGCCATCT ATTTTCTCAT   180
AGATAAAGCG AGCC                                     194
```

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:** 180 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

TCGCGCTCTG CTTTCATTTC TATGGTTATT CGTGGAATGA CTCTTTGACC ACGCGGAGAA 60
 GGCAAAACTT CAGCCATTG TGTTTTTTTC CCCTTGGCCT TCCCCCCTTT CCCAGGAAGT 120
 CCGACTTGTT CATCTTGTTT TTCCTTGGCT TCAACAGCCT CCAATTCTTC AATAAATGTA 180
 GCCAAGTCTT CTTTCCACAA ATCTGA 206

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:** 194 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GACACGACAC TTTTCTGTGG TTTCAGTTCT TTGTTACTAA GTTTTGGGGA AGTTTTGGTC 60
 TTAGGTGGAC TAGCATCTGA TGGGACAAAA TCTTCATCAT CAGTTTTTTC ATCAAAATCT 120
 GAGAAATCTT CATCTGAATC CAAATCCATT GTGAATTTTG TTTTGTGTC TGCTCTCCGT 180
 GGCTCTGTTT CTCG 194

(2) INFORMATION FOR SEQ ID NO:9:**(i) SEQUENCE CHARACTERISTICS:**

- (A) LENGTH:** 242 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA**(iii) HYPOTHETICAL:** NO**(iv) ANTI-SENSE:** NO**(xi) SEQUENCE DESCRIPTION:** SEQ ID NO:9:

CTGAAACCAC AGAAAAGTGT CGTGTCTCAGAC CTTGAAGCTG ATGATGTTAA GGGCAGTGTA 60
 CCACTGTCTT CAAGCCCTCC TGCTACACAT TTCCAGATG AAAGTCAAAT TACAAACCCA 120
 GTTCCTAAAA AGAATGTGAC AGTGAAGAAG ACAGCAGCAA AAAGTCAGTC TTCCACCTCC 180
 ACTACCGGTG CCAAAAAAAG GGCTGCCCCA AAAGGAACTA AAAGGGATCC AGCTTTGAAT 240
 TC 242

(2) INFORMATION FOR SEQ ID NO:10:**(i) SEQUENCE CHARACTERISTICS:**

- (A) LENGTH:** 341 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA**(iii) HYPOTHETICAL:** NO**(iv) ANTI-SENSE:** NO**(xi) SEQUENCE DESCRIPTION:** SEQ ID NO:10:

AACCAGCGTG TTGAGCCTGA ATGGTACATT CCTATTATTC CCATGGTGCT GATAAATGGT 60
 GCTGAAGGAA TCGGTACTGG GTGGTCCTGC AAAATCCCCA ACTTTGATGT GCGTGAAATT 120
 GTAAATAACA TCAGGCGTTT GATGGATGGA GAAGAACCTT TGCCAATGCT TCCAAGTTAC 180

AAGAACTTCA AGGGTACTAT TGAAGAACTG GCTCCAAATC AATATGTGAT TAGTGGTGAA 240
 GTAGCTATTC TTAATTCTAC AACCATTGAA ATCTCAGAGC TTCCCGTCAG AACATGGACC 300
 CAGACATACA AAGAACAAGT TCTAGAACCC ATGTTGAATG G 341

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 220 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

AATTCAAAGC TGGATCCCTT TTAGTTCCTT TTGGGGCAGC CCTTTTTTTG GCACCGGTAG 60
 TGGAGGTGGA AGACTGACTT TTTGCTGCTG TCTTCTTCAC TGTCACATTC TTTTATAGGAA 120
 CTGGGTTTGT AATTTTCAGTT TCATCTGGGA AATGTGTAGC AGGAGGGCTT GAAGACAGTG 180
 GTACACTGCC CTTAACATCA TCAGCTTCAA GGTCTGACAC 220

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2389 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GTGTTGAGCC TGAATGGTAC ATTCTATTA TTCCCATGGT GCTGATAAAT GGTGCTGAAG 60
 GAATCGGTAC TGGGTGGTCC TGCAAAATCC CCAACTTTGA TGTGCGTGAA TTGTAAATA 120
 ACATCAGGCG TTTGATGGAT GGAGAAGAAC CTTTGCCAAT GCTTCCAAGT 170

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

AATCATCGAT GGATGGATGG

20

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: YES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

CCATCCATCCATCGATGATTAAA

23

(2) INFORMATION FOR SEQ ID NO:15:**(i) SEQUENCE CHARACTERISTICS:****(A) LENGTH:** 327 base pairs**(B) TYPE:** nucleic acid**(C) STRANDEDNESS:** single**(D) TOPOLOGY:** linear**(ii) MOLECULE TYPE:** cDNA**(iii) HYPOTHETICAL:** NO**(iv) ANTI-SENSE:** YES**(xi) SEQUENCE DESCRIPTION:** SEQ ID NO:15:

CTTGATCCCT TCTGGTTGAT GCCAGAAGCT CTCCTGATC CAGCATTTGT ATCTTCAATT 60
TCTCTACCAA TTGGCTTTGT TGGTTAATCT CTCATCCTT GTCATCAAGT TGTTTATACA 120
ATTTAGCAAG TTCTTCTTCA CACTTTCTTC TTTCAGCATC GGTA AAACTA CCAGCCATTC 180
CGACTGCAGC AGCTGGTTTA TCACTGGTAA TAGCAATATC TTTATCCGCT GTGAAGGCTT 240
CCAAATTAGC TTTCTCTTTG TCAA ACTGCT CATCAATAGG CACTGTCTCC CCGTTACGCC 300
AACGGTTTAG CTCGTTTTC AGCCACT 327

(2) INFORMATION FOR SEQ ID NO:16:**(i) SEQUENCE CHARACTERISTICS:****(A) LENGTH:** 250 base pairs**(B) TYPE:** nucleic acid**(C) STRANDEDNESS:** single**(D) TOPOLOGY:** linear**(ii) MOLECULE TYPE:** cDNA**(iii) HYPOTHETICAL:** NO**(iv) ANTI-SENSE:** NO**(xi) SEQUENCE DESCRIPTION:** SEQ ID NO:16:

CCGACCGGGA GCGGGAGAAG GAGCGGGAGC GGGAGCAGCG GGAGAAGGAG CGGGAGAAGG 60
AGCTGGAGCG CGACGGGAGA AGGAACGGGA GCGCGAGCTG GAGCGGCAGC GGGAGCAGCG 120

GGCGAGGGAG AAGGAGCTGC TGGCTGCCAA GGCCTTAGAG CCCACCACCT TCCTGCCTGT 180
 GGCCGAGCTG CACGGACTCC GAGGTCACAG CACGGAGGAG CGGCCCAAGC CCTCGGAGCA 240
 GCTGACCCCA 250

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 208 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

CTCAGAGGTG ATCCTCTCGG AGTCGAGCTC AGGAGAAGGA GTCCCCTTCT TTGAGACTTG 60
 GATGCAGACC TGCATGTCCG AGGAGGGCAA GATTTTGAAC CCTGACCATC CCTGCTTCCG 120
 CCCTGACTCC ACCGAAGTCG AGTCCTTGGT GGCCCTGCTC AACAACTCTT CAGAGATGAA 180
 GCTAGTACAG ATGAAGTAGC ACGAGGCC 208

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 2389 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

CGACAAACAT CATCTGGGAA GACCCACACG ATGGAGGGTA AACTTCATGA TCCAGAAGGC 60
 ATGGGAATTA TTCCAAGAAT AGTGCAAGAT ATTTTAAATT ATATTTACTC CATGGATGAA 120
 AATTTGGAAT TTCATATTAA GGTTCATAT TTTGAAATAT ATTTGGATAA GATAAGGGAC 180
 TTGTTAGATG TTTCAAAGAC TAACCTTTCA GTCCATGAAG AAAAAACCG TGTTCCTAT 240
 GTAAAGGGGT GCACAGAACG TTTCGTGTGT AGTCCAGATG AAGTCATGGA TACCATAGAT 300
 GAAGGGAAAT CCAACAGAGA TGTCGCAGTT ACAAATATGA ATGAACATAG CTCTAGGAGC 360
 CACAGCATAT TTCTTATTAA TGTA AAAACA GAGAATACAC AAACGGAACA GAAACTCAGT 420
 GGAAAGCTTT ATCTGGTTGA TTTAGCTGGC AGTGAGAAGG TTAGTAAGAC TGGGGCTGAA 480
 GGTGCTGTGC TGGATGAAGC TAAGAACATC AAGAAGTCAC TTTCTGCACT TGGAAATGTC 540
 ATTTCTGCTT TGGCAGAGGG CAGTACCTAT GTTCCTTATC GAGATAGTAA AATGACCAGA 600
 ATTCTTCAAG ATTCATTAGG TGGCAACTGT AGGACCACTA TTGTCATATG CTGCTCTCCA 660
 TCATCATACA ATGAGTCTGA GACAAAGTCA ACACTCCTCT TTGGTCAAAG GGCCAAAACA 720
 ATTAAGAACA CAGTCTGTGT CAATGTAGAG TTAAGTGCAG AGCAGTGGAA AAAGAAGTAT 780
 GAAAAAGAAA AGGAAAAAAA TAAGACTCTA CGGAACACTA TTCAGTGGCT GAAAAACGAG 840
 CTAAACCGTT GCGTAACGG GGAGACAGTG CCTATTGATG AGCAGTTTGA CAAAGAGAAA 900
 GCTAATTTGG AAGCCTTCAC AGCGGATAAA GATACTGCTA TTACCAGTGA TAAACCAGCT 960
 GCTGCAGTCG GAATGGCTGG TAGTTTTACC GATGCTGAAA GAAGAAAGTG TGAAGAAGAA 1020
 CTTGCTAAAT TGTATAACA GCTTGATGAC AAGGATGAAG AGATTAACCA ACAAAGCCAA 1080
 TTGGTAGAGA AATTGAAGAC ACAAATGCTG GATCAGGAAG AGCTTCTGGC ATCAACCAGA 1140
 AGGGATCAAG ATAATATGCA AGCTGAACTG AATCGCCTCC AAGCAGAAAA TGATGCTTCT 1200
 AAAGAAGAAG TCAAAGAAGT TTTACAGGCC TTAGAGGAAC TGGCTGTAA TTATGATCAG 1260
 AAGTCTCAGG AAGTTGAAGA CAAAACAAAG GAATATGAAT TGCTTAGTGA TGAATTGAAT 1320
 CAAAAATCTG CAACTTTAGC AAGTATTGAT GCTGAGCTTC AGAAGCTGAA GGAAATGACC 1380
 AACCACCAGA AGAAACGAGC AGCTGAAATG ATGGCATCAT TATTA AAAAGA CCTTGCAGAA 1440
 ATAGGAATTG CTGTGGGGAA TAACGATGTG AAGCAACCAG AAGGAACTGGTATGATAGAT 1500

GAAGAGTTTA CTGTTGCAAG ACTCTACATT AGCAAAATGA AATCAGAAGT AAAGACCATG 1560
 GTGAAACGCT GCAAACAGCT AGAAAGCACG CAGACTGAGA GCAACAAAAA AATGGAAGAA 1620
 AATGAGAAAG AGTTAGCAGC ATGCCAGCTT CGGATCTCCC AACATGAAGC CAAAATCAAG 1680
 TCACTGACTG AGTACCTTCA GAATGTAGAA CAAAAGAAGA GGCAGCTGGA GGAATCTGTT 1740
 GATTCCCTTG GTGAGGAGCT AGTCCAATC CGAGCACAAG AGAAAGTCCA TGAAATGGAA 1800
 AAAGAGCACT TGAACAAGGT TCAGACTGCA AATGAAGTCA AGCAAGCTGT TGAGCAGCAG 1860
 ATCCAGAGTC ACAGAGAAAC CCACCAAAAA CAAATCAGTA GCTTGCGAGA TGAAGTTGAG 1920
 GCAAAGGAAA AGCTAATCAC TGACCTCCAA GACCAAAACC AGAAGATGGT GTTGGAGCAG 1980
 GAACGGCTAA GGGTGGAGCA TGAGAGGCTG AAGGCTACAG ACCAAGAGAA GAGCAGGAAG 2040
 CTGCATGAGC TCACGGTTAT GCAAGACAGA CGAGAACAAG CAAGACAAGA CTTGAAGGGT 2100
 TTGGAGGAGA CCGTGGCAAA AGAACTTCAG ACTTTACACA ACCTGCGTAA GCTCTTTGTT 2160
 CAGGACTTGG CTACCAGGGT GAAAAAGAGG CCGAGGTCGA CTCTGACGAC ACTGGCGGCA 2220
 GTGCTGCACA GAAGCAGAAA ATCTCCTTCC TTGAAAACAA CCTTGAACAG CTCACCAAAG 2280
 TGCACAAGCA GTTGGTACGT GATAATGCAG ATCTTCGCTG TGAGCTTCCT AAGTTAGAGA 2340
 AACGGCTTAG AGCTACTGCA GAAAGAGTGA AAGCTTTGGA GTCAGCCCCG 2389

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

AGTGGCTGGA AAACGAGCTA

20

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:** 20 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

CTTGATCCCT TCTGGTTGAT

20

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:** 20 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

AGTGGCTTGA AAATGAGCTC

20

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:** 21 base pairs
- (B) TYPE:** nucleic acid
- (C) STRANDEDNESS:** single
- (D) TOPOLOGY:** linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

CTTGATCCCT TCTGGTAGAT G

21